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Vocal Cord Dysfunction (VCD) ¹:

This condition is often referred to as an asthma mimic. Many people with VCD will report asthma-like symptoms or a sensation of throat tightness to their doctors. Sometime these symptoms can be quite scary. But, the condition is not inflammatory, like asthma. In a person without VCD, breathing in and out will cause the vocal cords to open to allow air to pass through the trachea. With VCD, the vocal cords close with inspiration and/or with expiration leading to a smaller opening for air to pass through. This, in turn, can lead to asthma-like symptoms.

Luckily, correct diagnosis and treatment can lead to resolution of the condition.

Symptoms may include:

- shortness of breath
- hoarseness
- wheezing
- chronic cough
- throat clearing
- chest and/or throat tightness
- air hunger

Triggers (though not always present):

- upper respiratory infections
- pollution
- chemical fumes
- noxious odors
- cigarette smoke
- singing
- laughing
- emotional stress
- post-nasal drip
- gastroesophageal reflux disease
- laryngopharyngeal reflux (or, “silent reflux”)
- cold air
- exercise

Diagnosis

Oftentimes, patients will be misdiagnosed with asthma or treated with asthma medications like oral prednisone. However, the symptoms typically don't respond as one would expect to these medications. Typically, the diagnosis of VCD is made clinically based upon the history and by ruling out other potential causes. Two of the more common tests that may be used to help diagnose VCD are spirometry and laryngoscopy. Spirometry, a breathing test that your allergist may perform, can be useful for diagnosing VCD if there are ongoing symptoms. A tell-tale sign of VCD with spirometry is what is called a flattened inspiratory loop. Used less frequently is a procedure called laryngoscopy. In this procedure, typically done by an ENT, visualization of the vocal chords with a fiberoptic tube reveals the vocal chords closing incorrectly with breathing maneuvers. Unfortunately, this procedure is only effective during symptomatic episodes.

Treatment

In patients without asthma who have VCD, asthma medications are usually stopped. If both asthma and VCD are diagnosed, the asthma medications typically are slowly tapered as the symptoms improve. Since reflux (both symptomatic and silent) and post-nasal drip are frequent aggravating factors for VCD, treatment will oftentimes include therapies to target these problems. Oftentimes, a technique called sniff-breathing can be effective. This breathing technique requires the patient to breathe slowly in through the nose and exhale completely and slowly through pursed lips. Attention is paid to using the diaphragm muscle and not the upper chest to breathe (aka abdominal breathing). Utilizing the sniff breathing technique helps to keep the vocal cords stay open since it is more difficult to close the vocal cords with nasal breathing. And, slowing down the exhalation with pursed lips also helps to relax the vocal cords.

With more difficult to treat cases, an evaluation by a speech pathologist will be recommended. This therapy will focus on a number of additional techniques to help relax your throat muscles and gain better control of the vocal folds and throat. Other patients may benefit from counseling - emotional stress and underlying psychiatric disorders (e.g. anxiety or depression) can be profound triggers of VCD.

Summary

Vocal cord dysfunction can be very frustrating for patients. It can lead to worrisome symptoms and unnecessary exposures to medications. Once aware of the problems, symptoms typically are much less severe through a combination of breathing techniques and identification and treatment of underlying triggers.

Patient Resources

WebMD (excellent video) www.webmd.com/video/vocal-cord-dysfunction-asthma

National Jewish Health www.nationaljewish.org/healthinfo/conditions/vcd/

1. Adapted from <http://www.nationaljewish.org/healthinfo/conditions/vcd/diagnosis.aspx>